

Moderna - Funding the Platform After the Pandemic

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Decision scope: Hypothetical CEO and Board portfolio-allocation discussion

Case convention: This classroom scenario does not describe a documented private meeting or formal vote. Company statements and estimates are attributed. No later outcomes are included. The May 1 results release was filed with the SEC before the cutoff. The public call was scheduled for 8:00 a.m.; because the transcript PDF carries noon metadata and its first-publication time is unverified, transcript-only details are excluded.

The assignment

You are advising Moderna's leadership on how to allocate clinical, manufacturing and commercial capacity while the company works toward a lower operating-cost base. The May 1 update sets 2027 GAAP operating costs at \$4.7-\$5.0 billion, down \$1.4-\$1.7 billion from the 2025 estimate, while the company says it is advancing as many as ten products toward approval.

Recommend a portfolio rule for the next planning cycle. Should Moderna concentrate resources on near-term respiratory products; preserve a wider set of mRNA programs; or stage funding against evidence milestones and use partnerships where they can share cost or risk? Explain what capabilities each path protects, what it puts at risk, and what evidence should trigger continuation, expansion, partnering or stopping. You may propose a hybrid, but state its priorities and decision rules. Any thresholds you introduce are your assumptions, not company guidance.

A business in transition

Moderna entered 2025 with a commercial portfolio still concentrated in COVID-19 and an expanding research pipeline. In 2024, total revenue was \$3.236 billion and net product sales were \$3.109 billion. COVID-19 product sales were \$3.084 billion; RSV vaccine mRESVIA contributed \$25 million after its U.S. launch in the third quarter. Thus, COVID-19 represented about 99% of product sales. Revenue is not a measure of product-level profitability, customer retention or future demand. [1]

Management described the market as shifting from pandemic demand toward seasonal vaccination. In its 2024 filing, the company attributed lower U.S. COVID sales volume partly to lower vaccination rates and increased competition. It also identified vaccination rates, competition, RSV market size and factory licensure as uncertainties in its 2025 outlook. These are management explanations, not an independently measured decomposition of demand. [1, 2]

The first quarter underscored the timing challenge. Moderna reported \$108 million in revenue and \$86 million in net product sales, compared with \$167 million and \$167 million, respectively, a year earlier. Net loss was \$971 million and net cash used in operating activities was \$1.037 billion. Cash, cash equivalents and investments were \$8.4 billion at March 31, compared with \$9.5 billion at year-end. The balance decline, accounting loss and operating cash use are different measures. Management expected most 2025 revenue in the second half because respiratory-product sales are seasonal, so Q1 is not an annual run-rate forecast. [2]

A lower cost envelope

Management estimated 2025 revenue at \$1.5-\$2.5 billion, year-end cash at about \$6 billion, R&D expense near \$4.1 billion, SG&A near \$1.1 billion, cost of sales near \$1.2 billion and capital expenditures near \$0.4 billion. It projected GAAP operating costs of \$5.4-\$5.7 billion in 2026 and \$4.7-\$5.0 billion in 2027. These are estimates, not achieved results. Operating costs do not equal cash burn: they differ in scope and timing from working capital, capital spending and other cash flows. [2]

The 2024 R&D table shows why choosing programs does not mechanically determine the total cost base.

2024 R&D category	Reported spend
Respiratory programs	\$837m
Latent and other viruses	\$460m
Oncology	\$154m
Rare disease and other therapeutics	\$82m
Discovery and platform research	\$557m
Technical development and manufacturing	\$1,081m
Shared discovery and development	\$1,108m
Stock-based compensation	\$264m
Total	\$4,543m

The first four, program-specific categories totaled \$1.533 billion, about 34% of R&D. The remaining categories are not a single pool that can all be eliminated if a candidate is paused. Moderna says programs share technology, employees and infrastructure, while each also requires customization such as molecular architecture, route of administration and multivalency. It generally does not track indirect and shared R&D costs by program. The disclosures support possible reuse, but do not quantify the savings or spillovers from any particular portfolio choice. [1]

Pipeline choices have different clocks

At year-end 2024, Moderna reported 34 candidates across 44 programs, with 41 in clinical studies and 11 late-stage programs. Counts do not mean independent or equally valuable assets. At the May 1 update, the company reported several near-term respiratory milestones, including expected regulatory decisions for updated COVID and RSV vaccines, and a seasonal flu Phase 3 interim readout expected in summer 2025. The combination vaccine for older adults was targeting 2026. [1, 2]

The update also showed uncertainty in other areas. The Phase 3 CMV study was fully enrolled; an initial DSMB efficacy criterion was not met, but the study continued and Moderna remained blinded. The Phase 3 norovirus study was active, with its readout depending on accrual. In oncology, the company added a Phase 2 checkpoint program to its prioritized pipeline; it also reported ongoing Merck-partnered trials. Rare-disease programs remained in development. In addition, Moderna deprioritized mRNA-1083 for adults aged 18-49. These are company-reported statuses, not independent assessments of probability of success. [2]

A broad platform can preserve more shots on goal and potentially support learning across programs. It can also sustain clinical and technical spending across programs with common exposures. A narrow respiratory focus could concentrate execution and commercial attention around products with nearer milestones, but it may leave future growth more exposed to seasonal demand, uptake and competition. The public disclosures do not establish that either path has higher expected returns.

Funding, obligations and flexibility

Moderna announced a federal agreement in January 2025 under which BARDA and the Rapid Response Partnership Vehicle could provide up to \$590 million for late-stage pre-pandemic influenza work and studies involving as many as five additional pandemic subtypes. The headline amount is not equivalent to cash already received or spent; the agreement's milestones and remaining obligations matter. At December 31, 2024, the company also disclosed \$809 million of noncancelable raw-material and manufacturing obligations through 2027 and \$236 million of R&D and other obligations through 2029. These commitments may constrain how quickly spending can move. [1]

Some programs present nearer information points than others, but a milestone creates a useful option only when management can act on the information and has discretion to stop or partner. Continuing a study, manufacturing readiness, supply commitments and commercial preparation can create costs that remain after a program's priority changes. Public filings do not provide candidate-level full costs, remaining contractual tails or expected cash flows.

A portfolio is more than a list of candidates

A 2009 simulation study of R&D portfolios models programs as conditional investments that can be abandoned before later funding. Its two-project simulations show that option-like payoffs can make standard diversification intuition incomplete. This is a way to question the assumption that simply adding programs eliminates risk. It is not a Moderna forecast: the model uses stylized projects and supplies no Moderna-specific success rates, correlations, project costs or budget prescription. The company's own disclosures also leave cross-program scientific, regulatory, manufacturing and demand exposures unquantified. [3]

Moderna's leadership therefore faces several linked decisions: which clinical milestones to fund, how much shared platform and technical capacity to protect, what commercial capabilities to build ahead of approval, and when to partner or stop. Candidate-level economics and the value

of spillovers are not disclosed. The decision must be made with explicit uncertainty rather than a precise but unsupported ranking.

Questions for discussion

1. Which portfolio rule would you recommend: respiratory concentration, broad platform investment, or milestone-based staging and partnering? What is the strongest case against your recommendation?
2. Separate candidate funding from shared platform, technical/manufacturing and launch capacity. Which costs appear adjustable, and what information is missing?
3. How should the May 1 pipeline statuses affect the timing of funding decisions? Which milestones provide decision-useful information, and where might commitments limit the option to stop?
4. What measures or gates would you set for uptake, clinical evidence, cost, partnering and cash flexibility? Clearly label any thresholds as assumptions.
5. What additional company disclosures would most change your recommendation?

Sources

[1] Moderna, [2024 Form 10-K](#), filed February 21, 2025. Business and pipeline, pp. 77-87; MD&A, pp. 88-91; revenue note, pp. 114-115; commitments, pp. 132-133.

[2] Moderna, [May 1, 2025 Form 8-K and Q1 results release](#), accepted by the SEC at 6:31:33 a.m. EDT. Furnished Exhibit 99.1, pp. 1-4 and 6-7. The later Q1 Form 10-Q is outside the cutoff.

[3] S. van Bekkum, J. C. Pennings, and J. Smit, "A real options perspective on R&D portfolio diversification," *Research Policy* 38(7), 2009, pp. 1150-1158. [DOI](#). The study's model, method and limits are summarized in the research dossier.

Further source locators and reading-depth records: Moderna research source register.